

### SCHOTTKY BARRIER RECTIFIER

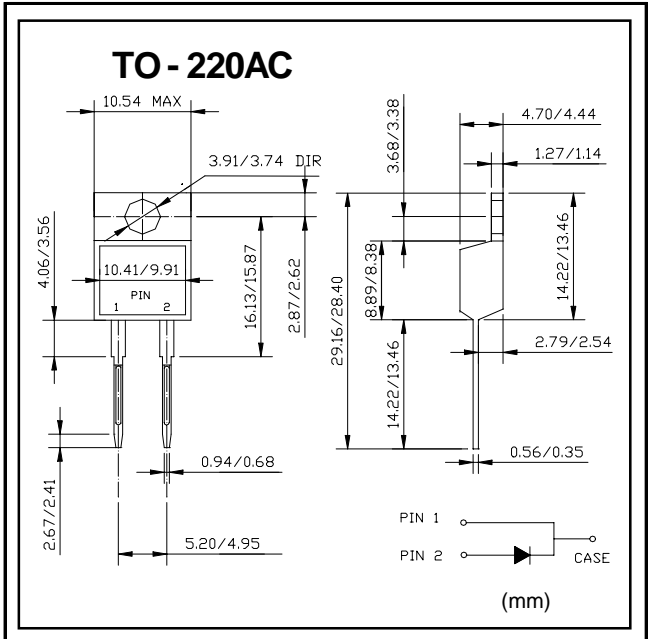
VOLTAGE RANGE: 20 --- 60 V  
CURRENT: 10 A

#### FEATURES

- ◇ Metal-Semiconductor junction with guard ring
- ◇ Epitaxial construction
- ◇ Low forward voltage drop, low switching losses
- ◇ High surge capability
- ◇ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ◇ The plastic material carries U/L recognition 94V-0

#### MECHANICAL DATA

- ◇ Case: JEDEC TO-220AC, molded plastic
- ◇ Terminals: Leads solderable per MIL-STD-750, Method 2026
- ◇ Polarity: As marked
- ◇ Weight: 0.08 ounces, 2.24 grams
- ◇ Mounting position: Any



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 50 Hz, resistive or inductive load. For capacitive load, derate by 20%.

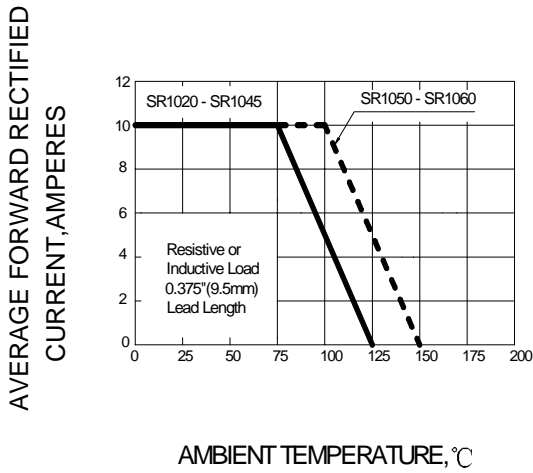
		SR 1020	SR 1030	SR 1035	SR 1040	SR 1045	SR 1050	SR 1060	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	35	40	45	50	60	V
Maximum RMS voltage	$V_{RMS}$	14	21	25	28	32	35	42	V
Maximum DC blocking voltage	$V_{DC}$	20	30	35	40	45	50	60	V
Maximum average forward rectified current (See FIG.1)	$I_{F(AV)}$	10.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load $T_J=125^\circ\text{C}$	$I_{FSM}$	150.0							A
Maximum instantaneous forward voltage @ 10A (Note1)	$V_F$	0.65					0.75		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	1.0					25.0		mA
Typical thermal resistance (Note2)	$R_{\theta JC}$	2.5							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-55 --- + 125					-55 --- + 150		$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 --- + 150							$^\circ\text{C}$

Note: 1. Pulse test: 300us pulse width, 1% duty cycle.

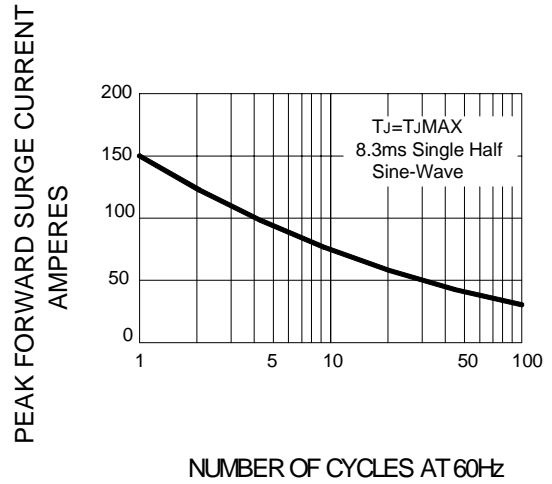
2. Thermal resistance junction to case.

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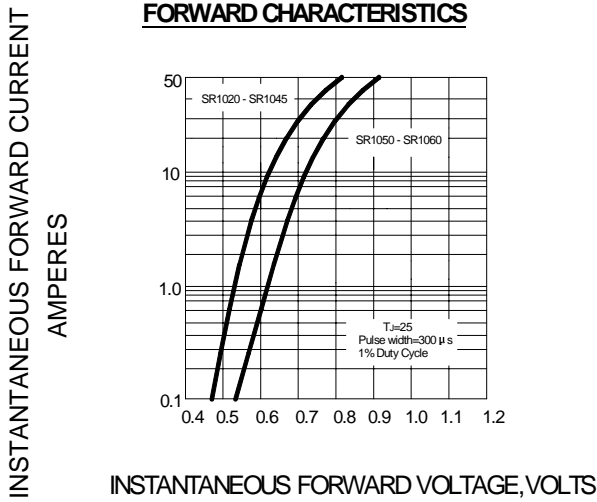
**FIG.1 – FORWARD CURRENT DERATING CURVE**



**FIG.2 – PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**

